# Red River/Water Quality Standards Meeting: Next Steps Toward Development and Adoption of Numeric Nutrient Criteria for the Red River

In 2007-2009, EPA Region 6 funded a state-driven project to develop numeric nutrient criteria for the Red River. Because this is an interstate water with portions of the watershed in each of the five states, and because of a unified state interest, EPA agreed that this was an ideal "large river" case study. At the request of the states, Region 6 offered funding support and oversight for the project, which was carried out by the University of Arkansas at Fayetteville (principle investigator: Brian Haggard).

The project was successfully completed and the final report and associated journal publications included data analyses applicable to the four aggregate ecoregions encompassed by the Red River. The data analyses presented are highly applicable towards the original goal of developing numeric nutrient criteria, however, the task of selecting values (magnitude) and the details of structuring criteria, and assessment related to the criteria (duration, frequency, flow) are now left up to the states.

At the joint Region 6/States Water Quality Standards meeting on March 21, 2013, the study results were summarized and discussed, along with possible next steps. The discussion was useful, but additional follow- up planning and discussion are needed to solidify next steps and reach agreement on a path to achieve the original goal of numeric nutrient criteria.

As a follow-up to the meeting, the Region agreed to outline next steps to further this effort. Here we attempt to capture the ideas discussed at the meeting and from internal discussions following the meeting. We would like to form a State/EPA team to move forward on these next steps. We look forward to receiving input from the states on the next steps and reaching agreement on a joint plan to complete this effort.

**Policy Topics**

1. Restate EPA position regarding both narrative and numeric nutrient criteria.

2. Evaluate downstream impacts and/or contributions to the GOM hypoxia using Sparrow modeling.

3. The Red River Compact Commission's authority is unclear to EPA, so we will need to investigate their role and how best to interact.

4. EPA senior and midlevel managers will initiate dialog with state senior and midlevel managers concerning Red River numeric nutrient criteria development and the need to make progress on a state-wide basis.

**Water Quality Standards Development**

1. EPA will investigate sources of funding to support continued nutrient criteria development potentially through N-Steps mechanism.

2. As part of a Red River scope of work, a specific task (e.g., literature review) for the purpose of evaluating current Red River chlorophyll a, TN, and TP thresholds, as developed by Haggard et al., to protect designated uses along the multijurisdictional main stem and downstream waters, should be included.

**Implementation**

1. Determine appropriate duration, flow, and allowable frequencies of exceedance for both permitting and assessment programs. As part of a Red River scope of work, a specific task for the purpose of developing ambient and permitting implementation guidelines should be included.

2. Review and evaluate current point and non-point dischargers to the multijurisdictional main stem of the Red River and its tributaries. Provide information pertaining to types of facilities, permitted discharge flow and limits, and if available, type of treatment process. Determine whether adoption of proposed criteria will result in § 303(d) impairment for each state.

3. Upon completion of the Red River numeric nutrient criteria development, the affected states (Arkansas, Oklahoma, Louisiana, and Texas) and EPA will explore available options for adopting criteria, such as state(s), the Red River Compact Commission or at the state's request, EPA promulgating criteria.